becomes intensely anæmic without extreme emaciation, and finally dies suddenly after a slight exertion, about four and a half years from the time when distinct symptoms were first observed.

At the post-mortem examination the supra-renal capsules are found in an advanced stage of fibroid and caseous change; there is extreme anæmia of all the tissues; the heart is slightly fatty; the spleen somewhat enlarged; the glands of the stomach are enlarged, and ecchymoses are found under the peritoneal coat of the small intestine. The lymphatics are not involved; and the abdominal ganglia of the sympathetic are healthy.

ART. IX.—*A Case of Sarcomatous Tumour mistaken for Popliteal Aneurism.* By ERSKINE MASON, M.D., Surgeon to Bellevue and the Roosevelt Hospitals. (With a wood-cut.)

IT is not the most pleasant duty for any of us to tell, let alone publish, our mistakes—either as to diagnosis or the treatment of our cases. Were we not so backward in this respect, I cannot but feel that probably we would advance our science and art quite as much as is done by publishing only those cases in which we have been more successful. In this way, at least, we may often prevent others unwittingly committing the blunders we ourselves have made. Indeed, it is only too often we hear the remark made of some that "we only hear of their successful cases."

The difficulties which often surround the diagnosis of aneurismal tumours are well known, and cases are recorded where our most astute diagnosticians have taken malignant growths for aneurisms, and aneurisms for other morbid growths. The symptoms of both are so clearly set forth in works that all have access to, that at first sight the student might fail to see how error could arise. In practice, however, how often are we assailed by doubts!

In the case we report, to our mind certainly all the signs of aneurism were well marked, and in this view we were confirmed by others; yet the result proved how great was our mistake. Even now, after a careful review of the case, we do not see how we could have arrived at any other conclusion than the one we did; and, though deeply deploring our error of diagnosis, we cannot but feel that, in a case presenting the same features as this one did at first, we would have no rule to guide us from falling into a similar error; unless, it is true, we should resort to an explorative puncture, and this certainly would not be judicious practice in every case of suspected aneurismal tumour, especially where all symptoms appeared so clear. Without further comment, therefore, we give the full history of our case, believing that it will prove of interest and instruction to those interested in the study of aneurisms or morbid growths.

C. Wagner, æt. 24, German, upholsterer, was admitted into my service at Roosevelt Hospital March 15, 1876. Patient gave his history as follows: Five months before entering the hospital, he began to suffer from pain in his left knee; this occurring after a hard day's work, and gradually increasing in severity. Seven weeks before I saw him, the joint began to "swell behind," and soon after this he could not walk without a cane, and then suffered great pain in the attempt. Outside the hospital it had been regarded as rheumatic, and for this affection he had received treatment; at another time he was supposed to be suffering from hip-disease. He does not remember at any time of having received an injury, but says that of late his work has been that of putting down carpets, and that in this way he might have strained the joint. His family history is not good, being of a phthisical stock.

On admission, there was discovered in the left popliteal space a sacculated oval-shaped tumour, two and a half inches in its vertical and two inches in its transverse diameters. Circumference of affected knee is fourteen inches—healthy knee twelve and three-quarters inches; affected limb just below the knee ten and a quarter inches—sound limb just below the knee eleven and a quarter inches. The temperature of affected knee is greater than that of the healthy one, while the temperature of the sound leg is greater than that of the affected leg. Besides the tumour occupying the popliteal space before described, there is another, apparently an off-growth from it, about the same size extending downwards towards the head of the fibula and upwards along the tendon of the biceps, which appears to be a partially consolidated aneurismal sac. There is no enlargement of the inguinal glands. The limb is semiflexed, and any attempt to straighten the limb causes considerable pain. General condition of patient good.

Upon careful examination, the tumour is observed to have a distinct, eccentric pulsation, which separates the hands when placed upon it. The pulsations of the tibials on this side are considerably feebler than upon the opposite limb. Upon auscultation, there is heard a *loud and distinct bruit*. Pressure upon the femoral diminishes the size of the tumour, and at once suspends the bruit. My diagnosis was at once popliteal aneurism; but having recently had my attention drawn to the difficulties which may surround the diagnoses of aneurism, by a paper on this subject, was more careful in my examination of this case than perhaps I otherwise should have been. The case was examined repeatedly both by myself and my colleagues of both the medical and surgical staff, and the opinion of all regarded it as a case of aneurism; and this, too, was the opinion of others not connected with the staff who examined the case.

I determined to try the action of flexing the leg, and, if that did not succeed, then pressure, before resorting to the ligature. The treatment was accordingly begun on the afternoon of March 17th, about three o'clock. The leg was placed at right-angles with the thigh, and maintained in this position by straps of adhesive plaster. This partially controlled the pulsation, the position soon becoming painful, he was given a dose of chloral.

18*th*, 9 A. M. P. 120; T. 98½. Pulsation somewhat less, but distinct; flexion was now increased, and ʒij of (U. S. P.) sol. morph. sulph. given to relieve pain. 6 P. M. P. 100; T. 98½.

19th, 9 A. M. P. 102; T. 99½. At 3 P. M., pulsation still continuing, I had digital compression made over the femoral below Poupart's ligament, in addition to the flexion of the knee; this was kept up for three hours and a half by relays of students. 6 P. M. P. 102; T. 99.

20th, 9 A. M. P. 108; T. 100¼. 6 P. M. P. 90; T. 99¼. Still pulsation in the tumour.

21st, 9 A. M. P. 90; T. 93¾. The tumour still pulsating flexion was now stopped, and digital compression made by students for about two hours; during this time the patient fainted twice. Three hours later compression was again used, this time, however, by an artery compressor, and kept up for about an hour; owing to pain, however, it was discontinued; pulsation had greatly diminished. After removal of the tourniquet, flexion was again resorted to, and this time increased so that the heel almost touched the buttock. The following morning, though there was still some fluctuation, the tumour was harder.

23d. P. 86; T. 100. 9 A. M. Digital compression was again employed for about six hours, which resulted in slightly diminishing the force of the pulsation; leg again flexed. 6 P. M. P. 84; T. 98½. Compression was kept up also by the compressor at intervals till one o'clock on the morning of the 26th, when it was discontinued owing to the pain it produced. When I saw him that morning the tumour was certainly harder; pulsation less, yet still very distinct; the knee was quite painful, and there was also more swelling about it. The patient being desirous to change his position, I let him get out of bed and sit up for a while on the 30th. Pulsation and bruit were now as distinct as ever. During this treatment by flexion, which the patient bore with great fortitude, it will be noticed how little variation was noted either in pulse or temperature. Morphia or chloral was administered from time to time to relieve pain and induce sleep at night.

On the 31st of March, at half-past two, in the presence of a class of students, assisted by Dr. Markoe, I ligated the femoral in Scarpa's space. All pulsation immediately ceased upon tightening the ligature, and *never afterwards* was observed. Patient had some pain in the knee after the ligature, but was more comfortable than before for some days; the ligature came away on the 13th of April.

May 1. Dr. Weir took charge of the service; the patient was now suffering great pain in the knee; the tumour had increased in size; the integument was slightly reddened; fluctuation was discovered over the inner side of the tumour above the condyle of the femur. Supposing the sac was suppurating, an aspirator was used, and a little blood and pus withdrawn, and poultice applied.

23d. A sharp-pointed bistoury was introduced, which let out a small quantity of bloody pus.

25th. The following note is made: There is a large oval swelling just above the inner condyle; tumour has increased greatly in size, and around the joint the circumference is sixteen inches. The swelling commences at the head of the tibia, and rises to its greatest diameter at the condyles, and gradually shades off directly along the course of the femoral artery, and to about six inches above the condyles. It greatly simulates a neoplasm. The pain is intense, chiefly extending down the outer side of the thigh and leg. Pain in the tumour is described by the patient as of a "bursting" character. He requires large doses of morphia to quiet the pain.

June 5. Fluctuation is distinct on the upper border of the tumour on the inner aspect of the leg; and a discharge of serum and bloody pus is issuing from the puncture made a few weeks ago.

8*th*. Discharge continues about the same; no change in the patient.

19*th*. A spontaneous opening occurred just above the punctured opening, through which an abundant discharge of pus escapes. Patient is fast losing strength.

22*d*. Dr. Weir amputated the limb in the middle third of the thigh. There was a greater number of arteries required the ligature, and of larger size than is usual in this amputation. The stump treated openly. 7 P. M. Patient had a chill.

23*d*, 8 A. M. He had another chill, and looks badly; stump looks sloughy.

24*th*. Passed a more comfortable night; appetite improving.

26*th*, 7½ A. M. Had a slight chill, but looks much better than he did a few days ago. The flaps have retracted, exposing the bone.

28*th* Complains of a feeling of chilliness, but had no distinct chill.

29*th*, 7 A M Had a severe chill; a hypodermic injection of morphia seemed to control it.

30*th*. Patient had two or three chills during the day.

July 2. Feels better, though had a chilly sensation during the day.

3*d*. Had a very severe chill last night, and hypodermic injections of water appeared to control them as well as the morphia. 7 P. M. Had a severe attack of vomiting, and complained of pain in the back and shoulders—this was controlled by a hypodermic injection of 20 m. of water.

4*th*. Stump doing nicely—bone protruding.

7*th*. He suffers from bed-sore over the sacrum, which gives him much pain, for the relief of which he sat up in a chair nearly all day.

10*th*. There is a slight improvement in his general condition; stump looks well; an abscess just two inches below Poupart's ligament was opened.

12*th*. Is not so well; bed-sores give him much trouble, and for relief he often stays in a rocking-chair all night.

16*th*. Looking badly and losing ground.

30*th*. Has considerable cough; examination revealed phthisis. His cough continued to give him great trouble, and he died exhausted by his cough and dyspnœa August 5th.

The following description of the post-mortem and microscopic examinations of the specimen has been kindly prepared for me by Dr. Heinemann, Assistant Pathologist to the hospital:—

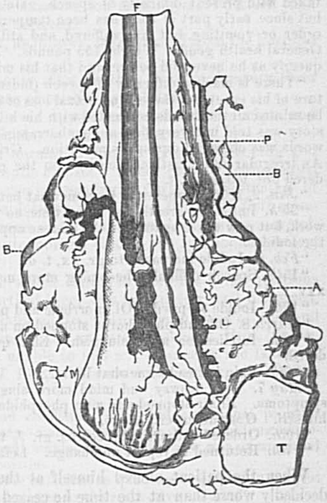
June 26. Appearance of limb after amputation. On the inner aspect of the lower end of the thigh, and filling up the greater portion of the popliteal space, is a large mass of new tissue, resembling in its regular contour and apparent gross structure the sac of an aneurism laid open, with its contents. This mass seemed to be composed of a succession of layers, like the organized fibrinous layers of an aneurismal clot. The tissue was of a firm consistency, of a dirty brownish-red colour, and coated here and there with pus, with blood, and broken-down tissue.

On passing the finger through an artificial opening made in the lower portion of the popliteal space, it entered a cavity which passed forward to the shaft of the femur. This cavity was partially filled with detritus of broken-down tissue. The lower end of the shaft of the femur was found fractured.

On making a longitudinal median section, involving the shaft of the femur and of the tibia, the following appearances were presented, as described by Dr. F. Delafield :—

"There is a tumour occupying five inches of the lower end of the femur; the tumour has completely replaced the medulla of the bone, and at a point four inches from the lower end of the bone has completely destroyed its shaft, so that there is an oblique fracture. The tumour has grown backwards, so as to form a circumscribed tumour the size of a goose's egg in the popliteal space. On the anterior and lateral surfaces of the femur is a periosteal tumour five inches long and two inches thick. The popliteal artery runs over the tumour in the popliteal space.

"*Microscopic Examination.*—The periosteal tumour consists of an abundant reticulated and fibrillated stroma, with a large number of cells. The cells are round, oval, fusiform, irregular, many large, some giant cells. The medulla of the shaft is replaced by new tissue, also the medulla of the cancellous bone forming the lower end of femur. This new tissue has more basement substance and fewer cells than the periosteal tumour. The shaft of the bone is destroyed by the new growth following the Haversian canals."



A. Supposed aneurism; B B. Secondary growth; P. Popliteal artery; F. Femur; T. Tibia.

Art. X.—*Partial Aphasia without Appreciable Lesion of Island of Reil.* By Horatio C. Wood, Jr., M.D., Professor of Materia Medica and Therapeutics, and Clinical Professor of Diseases of the Nervous System, in the University of Pennsylvania.

James D——, æt. 33, presented himself at the University Hospital Dispensary, June 11, 1875. He stated that he had been for a long time under treatment at the Orthopædic Hospital, without considerable improvement, but had discontinued his visits there for some time. Subsequently a history of his case was kindly furnished by Dr. Geo. S. Gerhard